

**USDA Agricultural Marketing Service Pesticide Data Program Federal/State Meeting
April 19-21, 2016
Sacramento, California**

Day 1: April 19, 2016

Welcoming Remarks

Mary Brazil, an Account Representative with the California Prison Industry Authority (CALPIA), welcomed the participants to the meeting and briefly talked about the CALPIA operations and facilities.

Diana Haynes, Director of the Monitoring Programs Division (MPD) Pesticide Data Program (PDP) thanked the staff from the California Department of Food and Agriculture (CDFA) and the California Department of Pesticide Regulation (CDPR) for organizing the 2016 Annual Federal/State PDP meeting. This year is the 25th anniversary of PDP, which is considered by many in and outside the U.S. as the “gold standard” of food monitoring programs.

Opening Remarks

After the introduction of all participants, Dr. Ruihong Guo, Deputy Administrator, USDA Agricultural Marketing Service (AMS) Science & Technology (S&T) addressed the participants and said “PDP is the pride of S&T for its 25 years of successful partnership with States, Federal agencies, and industry groups” and thanked all participants for their dedicated service. Dr. Guo talked about how the program, which handles more than 10,000 samples a year and produces over two million data points per year, has been meeting challenges to improve the program and stakeholders needs.

PDP: 25 years – a Historical Perspective

Nirmal Saini, Branch Chief, Center for Analytical Chemistry, Inspection Services Division, CDFA, as one of the few who has been associated with the program since its inception in 1991, provided a historical perspective of the program. The program evolved from six States sampling three commodities and testing eight chemicals in 1991 to 10 States sampling a total of 113 commodities to date and testing for more than 400 pesticides, metabolites, and isomers, using cutting-edge technologies.

Mr. Saini then introduced Karen Ross, Secretary, CDFA. Ms. Ross was appointed to her position by the California Governor in 2011. Ms. Ross has been an agriculturist all her life, growing up on a Nebraska farm, and serving as a leader in agricultural programs.

Keynote Address

Ms. Ross gave a rousing speech covering many areas of agricultural research promotion and trade. She discussed the management of pesticide application and processing and packaging of agricultural products. The State of California grows over 350 commodities and the top 20

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commodities nationwide are from California. Farmers have a high level of trust and confidence in the government and scientists, such as the participants in this meeting, play a critical role in ensuring that products are wholesome and in promoting trade. Ms. Ross also touched on the drought in California and the importance of the Governor's current water management policies.

Following the keynote speech, Paul Wenger, President, California Farm Bureau Federation, talked about his family's three generations of experience with California agriculture and adjusting to never-ending changes in farming, soil and water conservation, trade and consumer preferences, government policy and regulation such as the Food Safety Modernization Act (FSMA), and the changing faces and gender of modern day farmers. He talked about changes in farming practices regarding fertilizer and pesticide applications by citing nitrates in the groundwater and DDT.

PDP Administrative/Budget Issues

The MPD Director, Diana Haynes, announced the hiring of a new PDP chemist, Jonathan Senn, through the USDA Pathways program. Ms. Haynes discussed the Fiscal Year (FY) 2017 budget, which is likely to be equivalent to the FY 2016 budget. PDP received \$13.098 M for FY2016.

The Government Accountability Office (GAO) report based on the 2012 audit was released on November 6, 2014. The primary recommendation was that USDA and the U.S. Food and Drug Administration (FDA) should strengthen residue monitoring programs and increase transparency by disclosing sampling limitations. In order to respond to the GAO audit, PDP and USDA's National Agricultural Statistics Service (NASS) have reviewed PDP sampling methods, with EPA's assistance.

PDP held a Sampling Frame Meeting in November 2015 at EPA's Headquarters in Crystal City, VA, to consider GAO recommendations and potential responses and actions. PDP will work with NASS to determine a measure of sampling error and work to examine potential bias in the sample origin (domestic vs. imported) data. Beginning with the 2014 PDP Annual Summary, PDP has added information on sampling procedures and limitations of the sampling framework, as well as how the sample collection States and sites in the States are selected, and will continue to add more information to the 2015 Annual Summary.

PDP will use the Blue Book to verify that PDP sampling sites are reliable statistical representations of the national food distribution system. PDP held a conference call meeting with Sampling Managers in January 2016 to begin the process by requesting that Sampling Managers record the volume information from the Blue Book for their State. Progress on this project will be explored more in a Sampling Breakout Session tomorrow.

During the November meeting, PDP also explored a potential reduction of the total number of samples collected per commodity per year, while still maintaining statistical integrity. In addition,

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PDP will explore adjusting sampling numbers per State based on current population census figures. Discussions also included the needed additional coverage of South and Midwest States, which would require additional funds.

The PDP 2014 Annual Summary was released on January 11, 2016. Printed copies have arrived at the MPD office and will be distributed shortly. MPD has received all calendar year data for 2015 and the reconciliation process in preparation for compiling the 2015 Annual Summary is underway, with hopes to release the Annual Summary by the end of the 2016 calendar year. Changes to PDP laboratory liaisons were noted and the dates for sampling and laboratory reviews were discussed.

PDP has an active outreach program. MPD conducted a successful webinar in January 2016, broadcast live from USDA headquarters. The webinar is posted on PDP's website. MPD met with various stakeholders including the National Association of State Departments of Agriculture (NASDA) and CropLife America (CLA). MPD staff presented at the North American Chemical Residue Workshop (NACRW) meeting in Florida and at an American Chemical Society (ACS) National/Agro Division Symposium in Boston. PDP plans to hold a Stakeholders Meeting in September 2016 and will request input from meeting participants.

Program Planning

Diana Haynes summarized the Program Plan for 2016-2017 with potential sampling and testing changes.

Currently, PDP is testing several of the fruit and vegetables on the "dirty dozen" list released by the Environmental Working Group (EWG). They are apples, grapes, strawberries, cucumbers, lettuce, potatoes, and spinach. PDP is also testing oranges, pears, green beans, sweet potatoes, and tomatoes. In addition, PDP is testing eggs and milk.

As of April 1, 2016, testing of cherries ended and sweet potato testing by Michigan began. NSL is testing 300 samples of eggs between April and August. In October 2016, testing of apples by Washington, green beans by Texas, strawberries by California and tomatoes by New York will end. On January 2017, testing of grapes and pears by Ohio, oranges by Florida, potatoes by New York, and spinach by Michigan and New York (split commodity) will end.

PDP reviewed its commodity coverage and found that it has current data for most of the top 24 commodities consumed by children. Several potential replacement commodities were discussed:

- Applesauce
- Bottled water
- Cranberries

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- Kale
- Olives (begin with canned, black olives)
- Onions
- Canned pineapples
- Canned tomatoes
- Snap peas

All commodities, except kale and snap peas will be one year commodities.

Note: Kale and snap peas have been on the EWG's dirty dozen list.

Glyphosate has received a lot of press coverage lately and PDP has received numerous queries from the public and private sectors regarding glyphosate testing. FDA is planning to test corn and soybeans for glyphosate in its 2016 monitoring program. PDP will consult with EPA in July to discuss FDA's results and whether or not additional testing of a processed product, such as corn oil or corn syrup is warranted.

Day 1 Afternoon session: EPA and FDA talks

David Hrdy, EPA Health Effects Division gave an overview of the Office of Pesticide Programs (OPP) divisions, roles, and upcoming activities. EPA has played a major role in creating the Global MRL Database (GlobalMRL.com), which is an extremely valuable resource for tolerances. Mr. Hrdy discussed areas of interest to PDP, including potential glyphosate and honey testing and the GAO report on residue monitoring programs. He addressed how EPA is evaluating PDP's sampling frame and the number of samples needed per commodity. EPA statistical analyses have showed that an annual total of 600 samples per commodity would be statistically reliable and acceptable to EPA. EPA is considering a potential need for single serving studies and an industry-sponsored ethylene bisdithiocarbamate (EBDC) market basket survey that may require PDP sampling efforts.

Chris Sack, FDA Residue Expert, discussed the roles played by three Federal (USDA, FDA, and EPA) entities, State and local agencies, and contract laboratories along with laws to protect food from contamination. He briefly talked about FDA's role in the regulatory monitoring of pesticides, FDA's Total Diet Study (TDS), special assignments, and how FDA accomplishes these tasks. He showed FDA's trends in violation rates over several years and domestic vs. imported results. Differences in multiresidue methods (MRM) by liquid chromatograph (LC)/mass spectrometer (MS)/MS, gas chromatography (GC)/MS/MS triple quads, and GC full scan were discussed and data from special assignment studies and the TDS were shared. In the future, it is predicted that MRMs will involve High Resolution MS (HRMS) with the ability to detect over 1,200 chemical contaminants.

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Day 2, April 20, 2016

Bruce Young, Bayer Corporation, discussed CARES (Cumulative and Aggregative Risk Evaluation System) Next Generation (NG) using PDP data in dietary risk assessments. He showed the tiered approach to risk assessment and how PDP data have been used in developing risk models. He discussed how the CARES web tool, developed in 2001, is changing by upgrading data and exposure algorithms and moving to a cloud-based system. Screenshots of web-based queries on pesticides and commodities using the PDP tool were shared. Mr. Young thanked the program participants for the generation of the PDP data, an essential component of dietary risk assessment and noted that to date, PDP has collected over 234,500 samples and 26.5 million pesticide-commodity data points.

PDP Sampling Breakout Session

Chris Pappas (Sampling Manager/Chemist, MPD) led a PDP sampling program breakout session with the State Sampling Managers. The topics included use of Blue Book and sample allocation to States based on current census.

The project to compare volume information for PDP sampling sites from the Blue Book against State-assigned volumes yielded mixed results. Many of the sites did not have volume information listed in the Blue Book. Nevertheless, the participants felt that the Blue Book subscription was worth continuing to identify potential new sites for recruitment and to spot-check volume information.

Site recruitment was discussed and MPD will develop talking points for the States to use when inviting new sites to participate. Additionally, the site invitation letter will be revised and translated into both Spanish and Mandarin.

PDP sampling representation by United States census region was covered. There are four census regions (Northeast, Midwest, South, and West). The Northeast census region has 18 percent of the Nation's population and 15 percent of PDP samples are collected from this region. The Midwest census region has 21 percent of the Nation's population and 20 percent of PDP samples are collected from this region. The South census region has 38 percent of the Nation's population and 32 percent of PDP samples are collected from this region. The West census region has 24 percent of the Nation's population and 32 percent of PDP samples are collected from this region. Based on these figures, it was determined that no adjustments to the number of samples collected per State are needed. This will be verified with EPA.

PDP Technical Breakout Session

Diana Haynes, Director MPD, led the technical breakout session.

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Jon Wong, FDA Center for Food Safety and Applied Nutrition (CFSAN) provided an overview of FDA's current work in high resolution mass spectrometry (HRMS). FDA is planning to screen over 1,000 pesticides using this technology. Mr. Wong offered to share his HRMS database with meeting participants following the meeting.

Marie Denski, Chemist, AMS National Science Laboratory (NSL), showed results of her study on cleaning up samples with Agilent's new Enhanced Matrix Removal (EMR) cleanup that could replace the freezing and two solid phase extraction (SPE) cleanup steps, saving time and money.

Lida Ogg, Chemist/Technical Program Manager (TPM), Ohio, discussed the steps involved in EMR cleanup. She will do an experiment and present the results in a PDP conference call at a later date.

Gail Parker, Quality Assurance Officer (QAO), Florida, presented updates from the annual A2LA meeting. Ms. Parker discussed upcoming changes to policy P113 and new developments and revisions to ISO 17025. A2LA has released the changes in Committee Draft (CD2), which will be uploaded to the PDP Extranet.

Danny Tamplin, QAO, Texas, worked with PDP's Technical Advisory Group (TAG) and QAOs from other PDP laboratories on data retention requirements. Mr. Tamplin summarized the pros and cons of hardcopies vs. electronic records and the archival process of records in line with ISO, NARA, and MPD requirements. It was determined that MPD will revise Standard Operating Procedure (SOP) DATA subsection 8.2.2 to remove MPD requirements for hardcopy retention, as long as electronic records of all review and changes to the data are maintained.

Remote Data Entry and Extranet

Roger Fry (Database Administrator, MPD) gave a presentation on the Remote Data Entry (RDE) system. MPD is currently developing the distributed (local) RDE system that will be installed at each lab to replace the legacy Web-RDE system. The local RDE system will have similar layout and navigation features as the current Web-RDE system and will enable work to continue when USDA internet access is down. Some of the changes to the table structures include a dedicated Container/Package type field (separate from Commodity type), separate Brand Name and Best-by/Use-by Date fields, and bigger Facility, Lot#, and Comment fields. The target completion date for the new, local RDE system is 31 December 2016.

A demo was given of the LIMS-to-RDE Import Checker application upgrade. The new version includes an option for generating a data summary report that shows record counts and ranges of values reported for the 7 data tables that are imported. The new report will allow the lab to easily spot and fix other data discrepancies before the data are imported to RDE. The updated application and instructions are available for download as a ZIP file from the PDP Extranet site.

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The V5.0 upgrade to RDE e-SIF system will have changes to the table structure such as a dedicated container/package type field and expanded size of some text fields, like Lot# and Facility Name. The upgrade is expected to be distributed ahead of the local RDE system roll-out to laboratories.

A demo was given of the new e-SIF Manager application that can be used by State Sampling Managers to import all the e-SIF text files received from samplers into a database so that the managers can easily browse, sort, query, and generate summary reports for the e-SIF records. The app was developed to support the establishment of a sampler review process, where pictures of the packing and samples that are taken by the collectors can be compared against the e-SIFs. It can be used to more easily track down missing e-SIFs and to monitor individual and combined performance by samplers. Customized CDs holding the application and database populated with 2015/2016 e-SIF records can be sent to States upon request.

The PDP Extranet Site requires individual user IDs and passwords that have to be re-set every 60 days. Users can now re-set their own password ahead of the 60-day expiration using a link on the main PDP Extranet page. MPD staff can now re-set accounts/passwords again if users are locked-out. The temporary password provided during the re-set action cannot be changed for the next 24 hours. Excel files posted in the latest (.xlsx) format cannot be opened with a direct click on the file name. Instead, the selection box to the right of the filename needs to be clicked and the Edit in Microsoft Excel option needs to be selected from the drop-down menu.

SOP Revisions

Chris Pappas, MPD Chemist/Sampling Manager covered the May revision to the ADMIN SOP. The revision clarified procedures for archiving method validation and proficiency testing data, corrected procedures for completing the AD-122 form for equipment disposal, and added an option for email approval for one-time deviation requests.

The upcoming SOP revision schedule was outlined. LABOP will be revised in July 2016, QC in October 2016, and DATA in January 2017. Additionally, MPD Chemist Sitra Abubeker will be assuming SOP revision responsibility.

NASS-PDP Sampling and GAO Audit Response

Franklin Duan, NASS, gave a presentation on PDP's statistical sampling frame and potential improvements.

Due dates for States to supply NASS with updated Master Site lists and changes to the selection process:

- 1st Quarter: December 1st

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- 2nd Quarter: February 15th
- 3rd Quarter: June 1st
- 4th Quarter: September 1st

Day 3, April 23, 2015

Tolerance Table Update

A new tolerance table was issued on April 8, 2016 that included newly introduced commodities into the program. The values are from the e-CFR and laboratories should notify MPD of any discrepancies.

NARA Update

A slight change in the archival process, which does not affect the States, is in effect. USDA will be moving to a new electronic archival and retrieval process, which will be facilitated by MPD. States are requested to continue to submit SF-135 forms to MPD via email.

Proficiency Testing Program

Results for Proficiency Testing (PT) Round #232, Multiresidue Testing of Tomatoes, issued by the CDFA QAU were presented.

For FY 2016, one round remains – a FAPAS round for carrot multiresidue testing that shipped April 18, 2016.

The PT schedule for FY 2017 will be established during an upcoming PDP Conference Call once the FAPAS schedule is posted. Tentative plans include one FAPAS round and two CDFA-issued rounds (one fruit, one vegetable).

Committee Elections

Saeed Akhtar (NY) and Don Gallegos (CO) were elected as new members of the Sampling Advisory Group (SAG). Ken McManus will serve as the Presiding Member of the SAG.

Members of the Technical Advisory Group (TAG) include Sarva Gunjur (CA), Karen Stephani (NY), and Lida Ogg (OH), with Sarva Gunjur serving as the Presiding Member of the TAG.

Meeting Wrap Up

Wrap-up slides were presented and the meeting was adjourned.

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Brainstorming Session Recap

Potential Improvements

Meeting participants broke into groups to discuss potential improvements for PDP. The groups shared their ideas upon reconvening. Some of the primary topics that the groups touched on included: outreach, expansion of sampling and testing, improving inter-lab and MPD-lab communications, and sampling and technical items.

- Outreach
 - Meet with diverse groups such as EWG, etc.
 - Increase State outreach to Universities
 - Seek grower endorsement of the program
 - Investigate potential outreach regarding marijuana testing
 - Design a PDP logo
 - Use social media – Twitter, blog
 - Develop a 10-slide presentation for State outreach
 - Outreach should address how PDP affects human and animal health, food safety, consumer protection, ag/economic development
- Expand sampling and testing
 - Sampling – local, organics
 - FDA seafood testing – pair with FDA
- Improve inter-lab communication: conference calls – better planning
 - May 18: QA – corrective actions
 - June: commodity planning
 - Extranet tutorial
 - Sampling
 - Packaging procedures – eggs, strawberries
 - Sample receipt issues – samplers and lab receiving staff – educate on impact of specific mistakes
 - SIF discussion – can anything be dropped from the form?
 - Technical
 - Three labs present QuEChERS method in detail
 - EMR comparison
 - Workflow – tricks on processing
- Sampling Program
 - Training – e.g., video on how to package eggs
 - Improve site appreciation
 - Plaques
 - Invitation letter to sites – explain how sampling makes America's food safe, translate into Spanish and Mandarin
 - More feedback for Sampling Managers

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- Compare similar samples – data analysis
- Next year – longer Breakout sessions

Stakeholder Meeting

The brainstorming groups also discussed PDP's upcoming Stakeholder Meeting, planned for September 2016, and provided suggestions on who to invite, as well as agenda items.

- Invite decision-makers and consider how to pitch the program to meeting attendees
 - Legislature – Ag subcommittee and senior staff, Senators interested in food safety (e.g., Rosa DeLauro), FFA, Commissioner of Ag for participating States
 - Top sites – e.g., WalMart
 - Organic growers included?
 - States – NASDA
 - Farm Bureaus
 - Honeybee/pollinator reps
 - Gerber and other baby food manufacturers
- Agenda
 - Present on 25 years of achievements
 - Use the word “monitor” instead of “test”
 - Explain process of sampling and testing (borrow CDFA's presentation/slideshow)
 - Introduce names of long-participating sites
 - Have various sectors witness (e.g., United Fresh)